

NASA-JPL JUPITER PATROL:
2.3 GHz OBSERVATIONS DURING THE ENCOUNTER
WITH COMET SHOEMAKER -LEVY 9

Michael J. Klein, Samuel Gulkis
and Scott J. Bolton
Jet Propulsion Laboratory
California Institute of Technology
Pasadena, Ca 91109

For the past twenty-three years the antennas of the NASA Deep Space Network (DSN) have been used to measure temporal variations in Jupiter's decimetric flux density at 2295 MHz (13.1 cm). The program, known as the Jupiter Patrol, provides a data base of time variable synchrotrons emission that helps to bridge the data gaps among the *in situ* measurements of the Pioneer, Voyager and Galileo spacecraft.

Beginning in January 1994, the DSN observations were scheduled more frequently in preparation for the collision of periodic comet Shoemaker-Levy 9 with Jupiter in July. The preliminary results from **two dozen nights of observation show that the characteristics of the beaming curve** (the plot of intensity variations of the synchrotrons emission with the rotation of the Jovial magnetosphere) **is highly repeatable and consistent with previous history when one accounts** for known geometric effects (de Pater and Klein, NASA SP 494, 1989). These data will serve as a baseline for comparison during and after the comet encounter.

The observational data from January through July 1994 will be presented and deviations from the nominal beaming curve, if any are observed, will be discussed. The observing schedule will be enhanced during the summer months to increase the probability of "capturing" potential intensity variations with resolution time-scales as short as a few hours. The 13-cm DSN data will be made available for comparison with observations made at other centimeter wavelengths.